

## Responses to Public Comments on the SRKW Proposed Recovery Plan

NMFS received 50 comments on the Proposed Recovery Plan from a variety of sources including local, state, and Federal government entities, tribes, nonprofit organizations and interest groups, researchers and concerned citizens. Several informal public meetings on the Proposed Recovery Plan were held in Friday Harbor and Seattle upon request from interested parties.

We reviewed all comments received for substantive issues and new information. Wherever possible comments and suggestions were incorporated directly into the Final Recovery Plan for Southern Resident Killer Whales and are summarized in this document. This comment and response document is referenced in the Final Recovery Plan and provides some additional information on how comments were addressed. It was not possible to respond individually to all of the detailed comments received and similar comments have been grouped together in this document. We have assigned the comments by topic and to corresponding sections of the Recovery Plan. Comments supporting or restating information already included in the Plan, editorial comments, and minor corrections are not addressed here.

The Southern Residents killer whales are important to the people of the Pacific Northwest and we are grateful for the high level of public participation in developing a Recovery Plan. We appreciate the high quality of the comments and the great care with which so many individuals and organizations responded to the Proposed Conservation Plan and Proposed Recovery Plan. Many commenters provided positive feedback on elements of the plan and the timeliness of its development along with thoughtful critiques and suggestions for improvement. The Final Recovery Plan is the product of an open process over several years with input from hundreds of individuals and organizations and we intend to continue the long-term collaboration that will be necessary to implement the actions in the plan and update the plan in the future.

### **General Comments**

Comment 1: One tribe and another group commented that the plan lacks information on the cultural and spiritual importance of orcas to tribes and does not sufficiently acknowledge the rights, authorities and special expertise of tribal governments, particularly related to salmon management and recovery.

Response: We appreciate the thoughtful comments on cultural and spiritual importance of killer whales and have created a new section in the Final Recovery Plan to incorporate this information. We have also included new language regarding the rights and authorities of tribes related to the ESA and salmon and killer whale recovery. Executive Order 13175 (Consultation and Coordination with Indian Tribal Governments) outlines the responsibilities of the Federal Government in matters affecting tribal interests. In addition, Secretarial Order “American Indian Tribal Rights, Federal-Tribal Trust Responsibilities, and the Endangered Species Act” outlines NMFS’ responsibilities

regarding Indian tribal rights and Federal trust responsibilities when implementing the ESA.

Comment 2: Several commenters suggested that we provide a framework for the adaptive management approach described in the plan, including specific time frames and goals for incorporating new information into the plan.

Response: We acknowledge that this Final Recovery Plan is one step in a long-term process. Periodic reviews are part of the adaptive management approach as described in the plan. The ESA requires a review of all listed species at least once every five years. Guidance for these reviews is available on the NMFS website

<http://www.nmfs.noaa.gov/pr/listing/reviews.htm>

In addition, NMFS Interim Endangered and Threatened Species Recovery Planning Guidance (NMFS 2007) suggests review of approved recovery plans immediately following the five-year species review, in conjunction with implementation of recovery actions and monitoring, to determine whether the plan needs to be updated.

Comment 3: One commenter suggested creating a Recovery Action Team to implement the recovery actions. In addition, one commenter suggested having additional workshops to assist in refining management actions to enable effective implementation (i.e., create a cleanup timeline for sites, prioritized by largest threats, so all sites cleaned up by 2020). There were several comments that the management actions in the plan were too broad and general and lacked specificity and benchmarks to measure success.

Response: In recognition of the uncertainties, active research program and potential for new information to assist in refining and prioritizing recovery actions, we have introduced the concept of topic specific ad hoc workshops and/or implementation teams in the Final Recovery Plan. To carry out the adaptive management process as described in the plan, NMFS will hold ad-hoc workshops to gather input on specific actions to be implemented under the Final Recovery Plan. While some of the actions in the Recovery Plan are general and high level at this time, we envision using new information and public input to develop more specific actions based on the available science. Individuals, stakeholder groups and managers with interest, expertise and jurisdiction regarding specific threats can provide input to assist NMFS with integrating the latest research information and refining and prioritizing management actions. NMFS will develop topic specific implementation plans which will receive public review and can be appended to the Recovery Plan or incorporated during periodic reviews of the plan.

Comment 4: One commenter suggested that the plan should more fully address actions off the Washington Coast and in relevant California and Oregon watersheds regarding prey, pollution, vessel interactions, and other activities such as seismic explorations.

Response: We recognize that some actions in the plan may focus on the inland waters and Puget Sound areas because there is a great deal of information about the whales' use of these areas and what threats exist in these areas. We have incorporated additional language regarding threats where we have sufficient information, and linked potential

future coastal actions to research actions to fill data gaps on use of offshore areas and potential threats in coastal waters. As potential threats offshore and in watersheds outside of Washington are identified, management actions to address them can be developed (see Comment 3 and Response).

Comment 5: One commenter requested that we use stronger language on the health of the whole ecosystem.

Response: While the focus of recovery plans is often a single species, we have reviewed the plan and incorporated language to acknowledge threats and recovery actions in the context of the ecosystem where applicable.

Comment 6: One commenter questioned why NMFS did not take a multi-species approach and combine Chinook and killer whale recovery planning.

Response: Recovery planning for listed salmon had been underway for many years under a community based framework when Southern Residents were listed. We are working toward integrating the salmon and killer whale recovery efforts, but it was not feasible to halt either recovery planning process in order to create a new process for a multi-species or more ecosystem-based approach. There are still uncertainties regarding the interactions of killer whales and salmon species and as we learn more about the interactions of species within the ecosystem we can better coordinate recovery of individual species and look toward a more ecosystem-based approach.

Comment 7: During comment periods for both the Proposed Recovery Plan and our Advanced Notice of Proposed Rulemaking to address vessel effect to Southern Resident killer whales, commenters suggested that we re-evaluate the idea of a Northwest Straits Marine Sanctuary that was discussed in the early 1990's.

Response: This comment has been passed on to NOAA's National Ocean Service and the National Marine Sanctuary Program for consideration.

Comment 8: One commenter raised the issue of compliance with NEPA and suggested that we prepare an EIS for the recovery plan.

Response: A recovery plan is a guidance document which does not require review under NEPA. NEPA review will be completed for appropriate actions in the plan when they are implemented.

Comment 9: One commenter suggested that NMFS should reevaluate the listing of the Southern Resident killer whale DPS endangered listing.

Response: See Comment 2 and Response above regarding periodic review of listings.

### **Existing Protective Measures**

Comment 10: Several commenters suggested we include information on the Puget Sound Partnership and the role it will play in orca recovery.

Response: Since release of the Proposed Recovery plan in November 2007, new information on the formation, structure, and goals of the Puget Sound Partnership have become available. The Final Recovery Plan incorporates new information on the Puget Sound Partnership and describes some of the ways in which we anticipate the Partnership's goals will integrate with the goals of this recovery plan. Opportunities for integration are described in several sections of the Final Recovery Plan including Existing Protective Measures, Environmental Contaminants, and the Recovery Program.

Comment 11: One commenter highlighted the importance of the waters around San Juan County and provided information on the San Juan County Marine Stewardship Area, San Juan Initiative and other local county programs.

Response: While many of these ongoing actions were identified in the Proposed Recovery Plan, we have incorporated updated information on the status of the Marine Stewardship Area and included new information that has become available on other local San Juan County initiatives as well.

### **Delisting and Downlisting Criteria**

Comment 12: Several commenters recommended that the threats criteria be more explicit and measureable. (i.e. provide specific goals rather than use general terms such as "knowledge" "understanding" "progress").

Response: Where possible we clarified delisting criteria and expanded the downlisting criteria to be more specific. Because of the uncertainties concerning the threats and which actions will be the most effective at addressing these factors, several of the threats criteria currently involve qualitative goals, such as increasing knowledge and understanding and making progress toward certain objectives. We envision that the recovery plan and threats criteria will be periodically evaluated (see Comment 2 and Response) and updated to include more explicit and measurable goals as we learn more about the threats and how they impact the whales and their recovery.

Comment 13: Two commenters recommended that the biological criteria be more precautionary with respect to numbers of reproductive males until more information is available. One commenter suggested that at least two reproductive age males in each pod would be a more appropriate criterion for downlisting until we have more information.

Response: The biological criteria in the Final Recovery Plan include the need for two reproductive males in each pod. While it is possible that research results on paternity may provide additional information on the number of males needed to sustain the population, we have revised our recovery criteria to be more conservative until we have more information.

Comment 14: One commenter suggested that we review the plan for internal consistency among criteria, recovery actions and research (i.e. oil spills management Priority 1, oil spill research Priority 2).

Response: We appreciate the observation that the priority level for some of the research actions and corresponding management actions are not always the same. We have reviewed the priority levels of the management and research actions and made some adjustments to ensure consistency. Because the definitions of the levels of priority are slightly different for management actions and research and monitoring (as described in the introduction to the implementation schedule), related actions do not always necessarily have the same priority.

Comment 15: One commenter suggested using 3 percent average growth per year in the recovery criteria as has been observed in Northern Resident killer whales.

Response: While one commenter suggested using 3 percent average growth per year, many more commenters supported the current 2.3 percent growth criteria. Several commenters specifically stated that they felt the current growth criteria were well supported and appropriate. Expecting an average growth rate of 3 percent per year, which has never been demonstrated over long periods in the past for Southern Residents, is likely setting an unreasonable bar for recovery and we have maintained the criteria at 2.3 percent which has been demonstrated in the past. As new information is available on the reproductive potential and growth rate of the Southern Residents, it may be appropriate to revise this recovery criterion in the future.

Comment 16: One commenter suggested that threat criterion A.2 should include support for wild salmon stocks and not just Puget Sound salmon.

Response: The application of this criterion regarding fisheries management is not limited to Puget Sound fisheries.

Comment 17: This commenter also requested that threat criterion A.3. mention newly emerging contaminants (flame retardants, endocrine disruptors, etc) as well as legacy compounds.

Response: Threat criterion D.1. addresses monitoring levels of emerging contaminants, however A.3. has also been amended to mention additional contaminants of concern in addition to legacy contaminants such as PCBs and DDTs.

Comment 18: One commenter suggested that the threat criteria section on “inadequacy of existing regulations” should include contaminants, vessel effects, oil spills and invasive species.

Response: Vessel effects are addressed under both “inadequacy of existing regulations” as well as “overutilization.” Oil spills are included under “other manmade factors.”

While certain issues may apply to several threat categories, we chose the most appropriate category and did not repeat the information.

Comment 19: One commenter suggested that under threat criterion E.2 oil spill regulations should be much more protective than old plans which are outdated and inadequate.

Response: We have received updated information on new initiatives to prevent oil spills in recent years and have included this new information in the Final Recovery Plan. If commenters have specific recommendations to improve current oil spill prevention plans, there are ongoing updates of these plans that include public review.

Comment 20: One commenter felt the threats criteria will make it difficult to ever downlist or delist Southern Residents and that the plan should only include measurable biological criteria.

Response: The current Recovery plan guidance (NMFS 2007 <http://www.nmfs.noaa.gov/pr/pdfs/recovery/guidance.pdf>) specifically mentions the importance of threats criteria and states “evaluating a species for potential reclassification or delisting requires an explicit analysis of threats under the five listing factors in addition to evaluation of population or demographic parameters.” The guidance cites court decisions affirming the need to address threats. As noted in Comment 2 and Response, we have employed qualitative measures in some cases to address uncertainty and the criteria can be refined as more information becomes available in the future.

Comment 21: One commenter suggested establishing an inter-birth interval criterion.

Response: We appreciate this comment and in the Final Recovery Plan we have included inter-birth intervals as a quantitative measure in Biological Criteria 2 to assess population parameters and consistency with an increasing population trend under Biological Criteria 1.

Comment 22: One commenter expressed concern that the recovery criteria would require SRKW to be listed for 28 years from the time of listing regardless of status of threats.

Response: The criteria in the Final Recovery Plan do not require that the Southern Residents be listed for a minimum of 28 years. The plan contains an explanation that the 28 year time period does not necessarily start at the time the plan is finalized or at the time of listing. There are several scenarios and time frames under which the recovery criteria could be met as described in the plan. If the population had dramatic increases in the next several years, this could be combined with earlier years to see if there was a 2.3 percent average growth per year over a 14 or 28 year time period retroactively.

### **Implementation Schedule**

Comment 23: Several commenters suggested that several of the actions should be assigned higher priority, particularly monitoring population status and monitoring

effectiveness of recovery actions. Other commenters suggested assigning vessel actions 1.3.1.1, 1.3.2, and 1.3.4 as Priority 1.

Response: Although Priority 1 is defined as “Actions that must be taken to prevent extinction or to prevent the species from declining irreversibly” we do acknowledge the importance of monitoring in evaluating if the species is in decline or on a path to recovery. We have assigned monitoring population status and effectiveness of recovery actions as Priority 1 in the Final Recovery Plan.

Comment 24: Several commenters suggested that we recognize and include the San Juan County Marine Stewardship Area and the list of management strategies for the area.

Response: We appreciate the work that has been done to identify management strategies for the San Juan County Marine Stewardship Area. Reference to the new information available on the MSA has been added to the Final Recovery Plan.

Comment 25: Several commenters suggested that additional or permanent funding should be included in the “budget” to support Soundwatch, OrcaNetwork, and the Center for Whale Research.

Response: Recovery plans must include estimated costs and timelines for recovery actions. There is no “budget” that necessarily goes along with a recovery plan and funding to implement actions may come from a variety of government and non-government sources. We have included information regarding ongoing efforts by groups such as Soundwatch, Orca Network and the Center for Whale Research and their importance to recovery. We hope that recognition of their important programs in the Final Recovery Plan will assist with identifying funding sources to continue their operations.

Comment 26: One commenter requested that we include an explanation of how cost estimates were made and why there were no estimates for some actions.

Response: Cost estimate information came from a variety of sources including comments submitted during comment periods. The Final Recovery Plan clarifies additional sources of information on cost estimates. There were several commenters that noted the lack of cost estimates for certain headings in the Implementation Schedule. As described in the introduction to the Implementation Schedule, we assigned costs to specific tasks and did not assign costs to the higher level grouping (for example headings 1.2 and 1.2.1 were not assigned cost estimates, however the action items 1.2.1.1 and 1.2.1.2 under them did include cost estimates for those particular actions.)

## **Management Actions**

### **Prey**

Comment 27: Many commenters recommended making a stronger link between killer whale recovery and salmon recovery, including the Puget Sound Salmon Recovery Plan and Draft Puget Sound Adaptive Management and Monitoring Plan that have been

completed. Other commentors suggested adopting salmon recovery plans as part of the Southern Resident recovery plan.

Response: Several salmon recovery plans have been completed since the release of the Proposed Recovery Plan. Where applicable, the Final Recovery Plan incorporates information from these salmon recovery plans. The current status of ongoing salmon recovery planning is listed on our web page at: <http://www.nwr.noaa.gov/Salmon-Recovery-Planning/ESA-Recovery-Plans/Draft-Plans.cfm>

Comment 28: Several commenters suggested actions to take for recovery of salmon including dam removal in the Klamath, Elwha, and Lower Snake Rivers. Commenters also suggested reducing harvest, curtailing fishing pressure on Puget Sound and Columbia River Chinook populations for five years, use of Pacific Salmon restoration funds for buy-back programs, and including prey needs of killer whales in salmon recovery goals.

Response: There were many comments that specifically addressed actions associated with recovery and management of listed salmonids. Many of these issues such as conservation goals for salmon and harvest are more fully addressed in recovery plans for salmon. The current status of ongoing salmon recovery planning is listed on our web page at: <http://www.nwr.noaa.gov/Salmon-Recovery-Planning/ESA-Recovery-Plans/Draft-Plans.cfm>

As salmon recovery plans are implemented and evaluated further we hope to provide specific information on the prey needs of Southern Residents to assist in evaluating salmon recovery goals and their efficacy in meeting Southern Resident killer whale recovery goals.

Comment 29: One commenter requested inclusion of the Pacific Salmon Treaty and NOAA's role in negotiations

Response: Specific information on the Pacific Salmon Treaty has been included in the "Harvest Management" section of the Recovery Program (see also Comment 54 and Response under Coordination).

### **Contaminants**

Comment 30: Several commenters suggested that the Recovery Plan include specific actions to reduce point and non point sources of pollution, such as banning the use of contaminants know to be harmful to marine mammals. Commenters also requested that the Plan provide more information on stormwater management. One commenter suggested including several new actions under 1.2.2 "Minimize continuing inputs of contaminants into the environment" including adding actions specific to stormwater control and treatment, upgrading water quality and sediment standards, reducing introduction of endocrine disruptors into Puget Sound, and phasing out mixing zones.

Response: Most of these actions are currently grouped under the point and non-point source headings under "Minimizing contaminants" or under "Monitoring emerging



contaminants.” New information on the state ban of PBDEs has been added to the plan (see Comment 37 and Response). We have also included some additional information regarding stormwater and mixing zones as requested. More specific actions under these headings can be developed in the future during recovery plan implementation (see Comment 3 and Response) and by working with the Puget Sound Partnership (see Comment 3 and Response).

Comment 31: One commenter suggested giving higher priority to clean up of Superfund sites.

Response: Clean up of Superfund sites with PCBs, DDTs and other contaminants known to be harmful to killer whales is assigned Priority 1 in the Final Recovery Plan.

Comment 32: One commenter requested that we include maps of contaminants outside of Puget Sound and maps of areas of aerial discharges.

Response: We agree that it is important to look at pollution outside of Puget Sound as well, but we currently do not have information to map coastal areas. Based on contaminant patterns in killer whales and other marine mammals in the region, the urban areas within Puget Sound contain higher levels of contaminants than surrounding areas. Because of limited resources, we started the mapping project with a focus on what is known regarding contaminated sediments and pollution in inland waters.

Comment 33: One commenter expressed concern that we did not specifically mention the 2001 MOA between NMFS, USFWS, EPA (66 FR 11202, 2/22/2001) describing procedures for enhancing coordination regarding protection of ESA listed species under section 7 of the ESA and the Clean Water Act.

Response: We have included information on the MOA in the Recovery Action Narrative in the Final Recovery Plan. Additional information on the MOA can be found on the EPA web page at:  
<http://www.epa.gov/fedrgstr/EPA-WATER/2001/February/Day-22/w2170.htm>

Comment 34: One commenter suggested including additional information on impacts of copper on juvenile salmon in the plan.

Response: Recovery plans for listed salmonids include more detailed information on copper and its effects on juvenile salmon. The current status of ongoing salmon recovery planning is listed on our web page at: <http://www.nwr.noaa.gov/Salmon-Recovery-Planning/ESA-Recovery-Plans/Draft-Plans.cfm>

Comment 35: One commenter suggested including recognition that unless source control accompanies clean up sites could be recontaminated.

Response: Additional language has been incorporated in the Final Recovery Plan to address source control in the context of recontamination of cleaned sites (see 1.2.1.2 of the Recovery Action Narrative).

Comment 36: One commenter specifically requested an action in the plan to ban mixing zones.

Response: There is new information available on mixing zones. Some background information has been added to the Final Recovery Plan in the “Environmental Contaminants” section. Specific actions regarding mixing zones may be identified in the context of an Implementation Team to further refine actions in the recovery plan in the future (see Comment 3 and Response).

Comment 37: One commenter specifically requested an action in the plan to ban PBDEs.

Response: Since the publication of the Proposed Recovery Plan, WA State has passed a bill regarding use of PBDEs. Information on this new initiative has been incorporated into the Final Recovery Plan. The complete bill can be found at:  
(<http://www.leg.wa.gov/pub/billinfo/2007-08/Pdf/Bills/House%20Bills/1024-S.E.pdf>).

Comment 38: Two commenters disagreed with inclusion of polycyclic aromatic hydrocarbons (PAHs) as contaminant of concern for Southern Residents based on the assertion that PAHs do not biomagnify in aquatic systems and there are no reports of PAH’s in whales.

Response: Exposure to PAHs can be chronic or acute as in the case of an oil spill. Although there are few studies of PAH levels and effects in wild marine mammals and no studies linking PAHs to the decline in the Southern Residents, there are concerns regarding carcinogenic effects of high levels of PAHs in some marine mammals (e.g., beluga whales). The reports referenced by the commenter do not include levels of PAHs, not because levels were low or not detected, but because Southern Resident killer whales have not been tested for PAHs (confirmed for NWFSC, checking with Ross, DFO). Collecting baseline information on PAH levels in killer whales and other marine mammals was identified as a data gap in a recent workshop to discuss oil spills and killer whales.

### **Vessels**

Comment 39: One commenter stated that the number of fishing vessels has declined in recent decades and suggested that other vessel traffic should be addressed prior to any changes in treaty fishing operations.

Response: The plan does acknowledge the reduction in the size of the fishing fleet in the past several decades. Information on the treaty fishing operations as well as NOAA’s trust responsibilities will be considered in any rulemaking to address vessel impacts, as well as any other management actions that may affect tribes. Executive Order 13175 (Consultation and Coordination with Indian Tribal Governments) outlines the

responsibilities of the Federal Government in matters affecting tribal interests. In addition, Secretarial Order “American Indian Tribal Rights, Federal-Tribal Trust Responsibilities, and the Endangered Species Act” outlines NMFS’ responsibilities regarding Indian tribal rights and Federal trust responsibilities when implementing the ESA.

Comment 40: Several commenters provided suggestions for regulating vessel traffic around the whales or provided information on areas that should be protected (feeding areas).

Response: These comments were similar to many suggestions we received during the comment period on our Advance Notice of Proposed Rulemaking (ANPR) to consider potential regulations to protect Southern Residents from vessel effects. The information provided on vessel regulation during the comment period on the Proposed Recovery plan will also be considered under the ANPR. The ANPR and supporting documents are posted on our web page at: <http://www.nwr.noaa.gov/Marine-Mammals/Whales-Dolphins-Porpoise/Killer-Whales/ESA-Status/Orca-Vessel-Regs.cfm>

Comment 41: One commenter suggested collecting data from the Whale Watch Operators Association Northwest on vessel types, time spent on whale watch trips, time with whales, and number of passengers to assist with evaluating whale watch effort and potential impacts to the whales.

Response: Some information on the whale watch industry has been collected as part of the Soundwatch program and as part of a socio-economic study conducted by the Northwest Fisheries Science Center. Similar requests for data collection from the whale watch association were received during the comment period on the ANPR (see Comment 40 and Response).

Comment 42: One commenter provided information on captive observations that nursing activity needs to move in a straight line and turning or moving around obstacles such as vessels could result in discontinuation of nursing.

Response: We appreciate this new information regarding nursing activity and potential effects from vessels and mention this concern in the Final Recovery Plan.

Comment 43: One commenter mentioned that the low frequency sound of cargo vessels was not in frequencies of peak sensitivity for killer whales and asserted that noise associated with commercial cargo vessels and oil tankers does not impact killer whales. This commenter suggested that the plan should clearly separate effects of sound from large vessels from effects of sound from small vessels.

Response: Although large vessels have predominantly low frequency sound, studies have reported broad band sounds from large cargo ships including significant levels of noise above 2 kHz (Hildebrand 2006 summarized in Holt 2007). While small vessels with higher frequency sound close to the whales may be of greater concern, particularly

related to masking of echolocation, large vessels do generate sound audible to the whales which may interfere with other important functions.

### **Oil Spills**

Comment 44: Several commenters highlighted the importance of the year round rescue tug and the Island's Oil Spill Association and suggested they be recognized in the plan.

Response: While both the tug and Island's Oil Spill Association were mentioned in the Proposed Recovery Plan, we appreciate the request for added emphasis and have included some additional language in the Final Recovery Plan.

Comment 45: One commenter expressed concern that any refinery maintenance or expansion plans should consider effects on whales and critical habitat.

Response: Refinery actions that require federal action (such as an Army Corps of Engineers permit for in-water construction) and may affect Southern Resident killer whales will be addressed under section 7 of the ESA.

Comment 46: One commenter suggested that in addition to identifying the Oil Spill Advisory Council, the plan should include information about the 2001 "Inter-agency Memorandum of Agreement (MOA) Regarding Oil Spill Planning and Response Activities Under the Federal Water Pollution Control Act's National Oil and Hazardous Substance Pollution Contingency Plan and the Endangered Species Act" by the US Coast Guard, EPA, Department of Interior, USFWS, and NOAA.

Response: We appreciate the information on the MOA and have included this information under the "Prevent oil spills" section of the Recovery Program. The MOA can be found on NOAA's web page at:

<http://reefshark.nmfs.noaa.gov/f/pds/publicsite/documents/procedures/02-301-24.pdf>

Comment 47: One commenter noted that the Proposed Recovery Plan relied on outdated information regarding the risk of oil spills (Neel et al 1997) and should include more recent information, for example the Washington Department of Ecology 2006 report "Spill Prevention, Preparedness, and Response Program" and should mention new prevention programs such as new oil spill transfer regulations that went into effect in September of 2006.

Response: We appreciate the newly available information on oil spills and prevention provided by industry and associations and have incorporated the updated information into the oil spill sections of the Final Recovery Plan.

### **Other threats**

Comment 48: One commenter suggested that the plan recognize potential impacts of new energy technology on killer whale recovery and critical habitat.

Response: New energy technology projects permitted or funded by FERC or other federal agencies will go through consultations under section 7 of the ESA to assess effects on listed species including Southern Resident killer whales. New energy technology and potential impacts have been included under “Potential Threats to Southern Resident killer whales” in the Final Recovery Plan.

Comment 49: Several commenters questioned why the plan does not include climate change as a threat to killer whales or actions to address climate change. Other commenters noted that climate change may affect whales through more frequent sewer overflows, toxics releases, spread of disease, loss of nearshore habitat and changes in food web.

Response: A section on climate change was included in the Proposed Recovery Plan. This section noted the data gaps regarding the specific impacts of climate change on Southern Resident killer whales. As more information on potential effects of climate change becomes available additional detail can be incorporated into the recovery plan in the future. As potential threats from climate change are identified, management actions to address climate change can be developed (see Comment 3 and Response).

Comment 50: One commenter suggested that NMFS develop an agreement with the Navy to address adverse actions to Southern Residents including direct effects and effects in military areas excluded from critical habitat designation.

Response: Section 7 of the ESA requires that federal agencies ensure that their actions are not likely to jeopardize the continued existence of listed species or destroy or adversely modify critical habitat. No additional agreement is necessary to evaluate potential effects of Navy actions. In addition, although military sites were not included in critical habitat designation, we are required to evaluate impacts on the whales themselves to insure no jeopardy from federal actions and evaluate impacts of activities outside critical habitat that may affect adjacent designated areas.

Comment 51: One commenter noted that the plan did not include impacts to the whales from research activities and suggested that the importance of answering a question should influence the invasiveness of research.

Response: We appreciate the concern about potential impacts to the whales from the active research program. Information on the potential for research activities to impact the whales has been included in the Final Recovery Plan. Permits for research on endangered species undergo NEPA review and section 7 consultation, which take into account the importance of the research question, the invasiveness of the techniques used to answer the question, and potential impacts to the whales.

## **Education**

Comment 52: One commenter identified the need for a clear process for providing new research results to numerous groups providing public information and education. This commenter also suggested expanding education programs to California and Oregon.

Response: The Northwest Fisheries Science Center has posted new research results on their web page and holds workshops to disseminate new information to the public. We have made every effort to include new research results in the Final Recovery Plan to serve as tool for public information and education. Individual researchers are encouraged to publish their results and share new information with the community. We also agree that expanding education programs outside of Washington is important.

Comment 53: One tribe commented that tribes should be included as a key component of the public outreach actions based on the tribal stories about the spiritual and cultural importance of orcas and suggested that these stories should be part of the recovery message.

Response: We appreciate the information about tribal stories and their role in education and outreach and have acknowledged the importance of spiritual and cultural messages in education. Tribes have also been included as responsible parties for education and outreach actions.

## **Coordination**

Comment 54: Several commenters highlighted the importance of linking U.S. recovery efforts to Canadian efforts and working with Canada on protecting Fraser River salmon, salmon fisheries in international waters, identifying critical habitat in Canada and addressing international sources of contamination.

Response: The United States and Canada have worked closely together to develop recovery plans and strategies for Southern Resident killer whales. We agree that linking efforts on both sides of the border whenever feasible will benefit the whales and make the most of limited resources. The proposed Recovery Strategy for Northern and Southern Resident Killer Whales (*Orcinus orca*) in Canada, released by DFO in March of 2007, includes information on several of the specific issues mentioned. The Canadian Recovery Strategy can be found on their web page at: <http://www.sararegistry.gc.ca> Management of U.S. salmon fisheries affecting Canadian origin salmon populations is regulated by the Pacific Salmon Treaty. Harvest limits under the treaty are developed by the fisheries co-managers and NMFS to allow for rebuilding of U.S. Chinook salmon stock affected by the fisheries.

Comment 55: One commenter suggested establishing a legal review team to provide guidance to local jurisdictions regarding what local regulations are allowed.

Response: While there is not a specific legal review team in place or identified in the plan, NMFS has responded to legal questions regarding local jurisdictions and the Endangered Species Act (such as the local ordinance put in place by San Juan County to address vessel effects) and will continue to respond to similar questions in the future.

Comment 56: One commenter suggested setting up an inter-jurisdictional trans-boundary oversight body to foster communication and coordination for recovery.

Response: While there is not a specific trans-boundary oversight body in place or identified in the plan, NMFS has frequent open communication with Canada's Department of Fisheries and Oceans regarding management and research activities, has identified this as a priority in the Final Recovery Plan and will continue to coordinate in the future.

### **Research**

Comment 57: One commenter identified the need for a population viability model incorporating prey, disturbance, toxins, disease, oil spills and other factors to estimate the effect of proposed actions on population growth rate. This could include a sensitivity analysis to identify which factors have high power to explain population dynamics.

Response: This is an interesting suggestion and has been passed on to the research team at the Northwest Fisheries Science Center to evaluate as part of ongoing modeling efforts and for consideration as part of the Research Plan.

Comment 58: One commenter noted that there is already sufficient data demonstrating that vessels affect whales and that more focus should be placed on estimating energetic costs of disturbance and extent of exposure to vessels.

Response: We agree that there is a growing body of research results documenting vessel effects on killer whales. There are several research projects underway to gather additional information on energetic costs associated with vessel effects and evaluate exposure. This comment will also be considered as NMFS considers whether to adopt vessel regulations (see Comment 40 and Response).

Comment 59: One commenter suggested using interdisciplinary studies to maximize research results and minimize impacts to whales (i.e. don't just study what whales are eating, but where they are eating to gather information on prey and habitat together).

Response: Researchers are encouraged to cooperate with each other and coordinate activities to reduce duplication of effort or unnecessary impacts to the whales. We will continue to encourage researchers to maximize the data gathered during approaches to whales to answer multiple questions with their studies.

### **Critical Habitat**

Comment 60: Many commenters provided recommendations for additional areas to be included in the critical habitat designation including nearshore habitat important for prey, shallow areas, coastal habitat, particularly the Olympic Coast National Marine Sanctuary, and Hood Canal. One commenter also asked for information on the process, criteria and time schedule to adjust critical habitat in the future.

Response: We have continued to receive information and suggestions regarding critical habitat after the final rule designating critical habitat was published in November 2006. In the final rule we acknowledged data gaps and our active research program and stated “we will consider new information as it becomes available to inform future considerations of critical habitat for Southern Residents.” Additional information on the critical habitat designation can be found on our web page at:

<http://www.nwr.noaa.gov/Marine-Mammals/Whales-Dolphins-Porpoise/Killer-Whales/ESA-Status/Orca-Critical-Habitat.cfm>

Periodic reviews of the species status, and recovery plan are part of the long term recovery strategy (see Comment 2 and Response) and will include review of new data available to inform revisions to the critical habitat designation in the future.

After the close of the public comment period, NMFS staff met with several commenters who requested an opportunity to review and clarify their comments. Following the meetings two groups submitted additional comments or made new suggestions. NMFS considered these comments to the extent possible as time allowed.

Comment 61: Several groups provided one set of additional comments with a focus on water quality and habitat issues, including suggestions for some specific actions for NOAA and other agencies to take with time limits included. (For example, EPA and WDOE will develop a program to phase out all Combined Sewer Outflows (within 10 years)). They also restated comments previously submitted and addressed above (see Comments 28, 29, 30, 46).

Response: NMFS will work with other agencies, particularly through section 7 consultations to evaluate the effects of their actions on Southern Resident killer whales, and within the framework of the Puget Sound Partnership. This coordination is currently included in the recovery plan and we have not included requirements for other agencies to implement actions within certain time frames at this time. The agencies mentioned are identified as responsible parties for actions under their jurisdiction in the implementation table. We will consider some of the specific actions suggested during development of implementation plans and in coordination with other agencies (see Comment 3 and Response). Some of the water and air quality issues of concern in the comments (dissolved oxygen, air toxic pollutants) have not been identified as specific threats for Southern Resident killer whales. While we agree that overall improvement of the condition of Puget Sound contributes to habitat improvement for the whales and their prey, the recovery plan for Southern Residents must focus on actions that are essential for the recovery of the endangered whales.

Comment 62: One industry association provided comments suggesting clarifications to how sounds from large and small vessels were addressed in the plan. They also made suggestions for differentiating large oil spill events from small chronic spills. In addition they provided specific information on recent improvements to prevent oil spills which



have reduced the likelihood of a major oil spill. The commenters also suggested including information on legal, national security and economic implications of regulating vessel traffic.

Response: We incorporated the new information on oil spill prevention in the plan and made some adjustments to the language describing the risks associated with major spills and chronic small inputs of oil. We also differentiated the risks associated with small vessels actively pursuing whales for whale watching activities from those of other types of vessels. Any regulation of vessel traffic will include analysis under the National Environmental Policy Act and we will consider economic and other effects during the rulemaking process.